

## Preliminary Amendment

### REMARKS

Claims 13 and 59-76 have been canceled. Claims 1-12, 14-58 and new Claims 77-146 are active in the present application.

### Amendments to the Claims

The claims have been amended in this divisional application in light of the restriction requirement in parent application Serial No. 10/149,449 filed June 27, 2002. The non-elected embodiments of the invention are pursued in this application. In particular, applicants refer to new Claims 141-146 which are directed to that aspect of the invention in which R<sup>10</sup> and R<sup>11</sup>, although defining a piperidine and pyrrolidine ring system, nevertheless require R<sup>12</sup> of R<sup>1</sup> or R<sup>2</sup> to be either heteroaryl or heteroaryl bonded via a C<sub>1-6</sub>-alkylene group, which groups were specifically excluded from consideration by the Examiner in the prosecution of the parent application. Further, support for the definition of the term "heteroaryl" in dependent Claims 139, 140, 142, 143, 145 and 146 can be found on page 12 of the text.

Preliminary Amendment

Accordingly the present application is believed to be in proper consideration for examination on its merits.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,  
MAIER & NEUSTADT, P.C.

A handwritten signature in black ink, appearing to read "FD Vastine".

Norman F. Oblon  
Attorney of Record  
Registration No. 24,618

Frederick D. Vastine, Ph.D.  
Registration No. 27,013

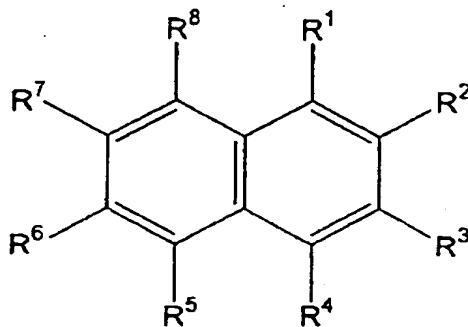
Customer Number

**22850**

Tel.: (703) 413-3000  
Fax: (703) 413-2220  
NFO:FDV

**THE FOLLOWING IS THE ENGLISH TRANSLATION OF THE  
ARTICLE 34 AMENDED SHEETS (Pages 68-74a)**

1. Substituted 1- and 2-naphthol Mannich bases of the general formula I



I

5

wherein

$R^1 = \text{CH}(R^9)\text{N}(R^{10})(R^{11})$  and  $R^2 = \text{OR}^{12}$

10

or

$R^1 = \text{OR}^{12}$  and  $R^2 = \text{CH}(R^9)\text{N}(R^{10})(R^{11})$ ,

15

and in each case the radicals

$R^3$  to  $R^8$  are identical or different and = H, F, Cl, Br,  $\text{CF}_3$ , CN,  $\text{NO}_2$ ,  $\text{SO}_2\text{NH}_2$ ,  $\text{SO}_2\text{NHR}^{13}$ ,  $\text{NHR}^{13}$ ,  $\text{SR}^{15}$ ,  $\text{OR}^{16}$ ,  $\text{CO}(\text{OR}^{20})$ ,  $\text{CH}_2\text{CO}(\text{OR}^{21})$ ,  $\text{CO}(R^{22})$ , a  $\text{C}_{1-10}$ -alkyl, an aryl or a heteroaryl radical or an aryl or heteroaryl radical bonded via a  $\text{C}_{1-6}$ -alkylene group,

20

$R^9$  denotes an aryl radical, a heteroaryl radical or an alkyl radical without an acid proton in the  $\alpha$ -position,

25

$R^{10}$ ,  $R^{11}$  are identical or different and denote a branched or unbranched, saturated or unsaturated, unsubstituted or at least monosubstituted  $C_{1-6}$ -alkyl radical or an unsubstituted or at least monosubstituted phenyl, benzyl or phenethyl radical,

or  $R^{10}$  and  $R^{11}$  together denote  $(CH_2)_2O(CH_2)_2$  or  $(CH_2)_n$ , where  $n$  = an integer from 3 to 6

$R^{12}$  = H,  $COR^{22}$ , a  $C_{1-10}$ -alkyl, an aryl or a heteroaryl radical or an aryl or heteroaryl radical bonded via a  $C_{1-6}$ -alkylene group,

$R^{13}$  = H,  $COR^{14}$ , a  $C_{1-10}$ -alkyl, an aryl or a heteroaryl radical or an aryl or heteroaryl radical bonded via a  $C_{1-6}$ -alkylene group,

$R^{14}$  = H, a  $C_{1-10}$ -alkyl, an aryl or a heteroaryl radical or an aryl or heteroaryl radical bonded via a  $C_{1-6}$ -alkylene group,

$R^{15}$  = H, a  $C_{1-10}$ -alkyl, an aryl or a heteroaryl radical or an aryl or heteroaryl radical bonded via a  $C_{1-6}$ -alkylene group,

$R^{16}$  = H,  $CO(R^{17})$ , a  $C_{1-10}$ -alkyl, an aryl or a heteroaryl radical or an aryl or heteroaryl radical bonded via a  $C_{1-6}$ -alkylene group,

$R^{17} = H$ , a  $C_{1-10}$ -alkyl, an aryl or a heteroaryl radical or an aryl or heteroaryl radical bonded via a  $C_{1-6}$ -alkylene group,

5  $R^{18} = H$ , a  $C_{1-10}$ -alkyl, an aryl or a heteroaryl radical or an aryl or heteroaryl radical bonded via a  $C_{1-6}$ -alkylene group,

10  $R^{20} = H$ , a  $C_{1-10}$ -alkyl, an aryl or a heteroaryl radical or an aryl or heteroaryl radical bonded via a  $C_{1-6}$ -alkylene group,

15  $R^{21} = H$ , a  $C_{1-10}$ -alkyl, an aryl or a heteroaryl radical or an aryl or heteroaryl radical bonded via a  $C_{1-6}$ -alkylene group,

$R^{22} = H$ ,  $NHNH_2$ ,  $NHR^{18}$ , a  $C_{1-10}$ -alkyl, an aryl or a heteroaryl radical or an aryl or heteroaryl radical bonded via a  $C_{1-6}$ -alkylene group,

20 and/or their racemates, enantiomers, diastereomers and/or corresponding bases and/or corresponding salts of physiologically tolerated acids,

25 excluding

the racemates of the compounds in which the radical  $R^1 = CH(R^9)N(R^{10})(R^{11})$  and  $R^2 = OR^{12}$  and in each case

30 the radicals  $R^3$  to  $R^8$  and  $R^{12} = H$ , the radical  $R^9 =$  phenyl, 2-chlorophenyl, 4-methoxyphenyl, 3-fluorophenyl, 3-chlorophenyl, 3-bromophenyl, 4-

bromophenyl, 2-fluorophenyl, 2-bromophenyl, benzo-1,3-dioxole, 4-CH<sub>3</sub>OCO-phenyl or 2-methoxyphenyl and the radicals R<sup>10</sup> and R<sup>11</sup> together = (CH<sub>2</sub>)<sub>5</sub>

5 or

the radicals R<sup>3</sup> to R<sup>8</sup> and R<sup>12</sup> = H, the radical R<sup>9</sup> = phenyl, 4-methoxyphenyl, 4-dimethylaminophenyl, 4-hydroxy-2,3-di-tert-butylphenyl, 2,3-dihydrobenzodioxane, 4-nitrophenyl or benzo-1,3-dioxole and the radicals R<sup>10</sup> and R<sup>11</sup> together = (CH<sub>2</sub>)<sub>2</sub>O(CH<sub>2</sub>)<sub>2</sub>.

15 or

the radicals R<sup>3</sup> to R<sup>8</sup> and R<sup>12</sup> = H, the radical R<sup>9</sup> = 4-methoxyphenyl and the radicals R<sup>10</sup> and R<sup>11</sup> together = (CH<sub>2</sub>)<sub>4</sub>

20 or

the radical R<sup>3</sup> = CO(OR<sup>20</sup>), the radicals R<sup>4</sup> to R<sup>8</sup> and R<sup>12</sup> = H, the radical R<sup>9</sup> = phenyl, 4-methoxyphenyl, 4-methylphenyl, 4-nitrophenyl or p-benzaldehyde, the radicals R<sup>10</sup> and R<sup>11</sup> together = (CH<sub>2</sub>)<sub>5</sub> and the radical R<sup>20</sup> = CH<sub>3</sub>

or

30 the radicals R<sup>3</sup> to R<sup>8</sup> and R<sup>12</sup> = H, the radical R<sup>9</sup> = phenyl and the two radicals R<sup>10</sup> and R<sup>11</sup> each = CH<sub>3</sub>, C<sub>2</sub>H<sub>5</sub> or n-C<sub>3</sub>H<sub>7</sub>

or

5 the radicals  $R^3$  to  $R^8$  each denote H, the radical  $R^{12} =$   
 $CH_3$ , the radical  $R^9 =$  phenyl and the two radicals  $R^{10}$   
 and  $R^{11}$  each  $= CH_3$

or

10 the radicals  $R^3$  to  $R^8$  and  $R^{12} = H$ , the radical  $R^9 =$  4-  
 methoxyphenyl or benzo-1,3-dioxole and the radicals  $R^{10}$   
 and  $R^{11}$  each  $= CH_3$

or

15 the radicals  $R^3$  to  $R^5$ ,  $R^7$ ,  $R^8$ ,  $R^{12} = H$ , the radical  $R^6 =$   
 Br, the radical  $R^9 =$  phenyl and the radicals  $R^{10}$  and  $R^{11}$   
 together  $= (CH_2)_5$

20 or

the radicals  $R^3$  to  $R^5$ ,  $R^7$ ,  $R^8$ ,  $R^{12} = H$ , the radical  $R^6 =$   
 Br, the radical  $R^9 =$  4-hydroxy-3,5-di-tert-butylphenyl  
 and the radicals  $R^{10}$  and  $R^{11}$  together  $= (CH_2)_2O(CH_2)_2$

25 or

30 the radicals  $R^3$  to  $R^8$  and  $R^{12} = H$ , the radical  $R^9 =$   
 phenyl and the radicals  $R^{10}$  and  $R^{11}$  each  $= CH_3$  as the  
 hydrochloride

or



the radicals  $R^3$  to  $R^8$  and  $R^{12} = H$ , the radical  $R^9 =$  phenyl or 4-methoxyphenyl and the radicals  $R^{10}$  and  $R^{11}$  together =  $(CH_2)_5$  as the hydrochloride

5

or

the radical  $R^3 = CO(OR^{20})$ , the radicals  $R^4$  to  $R^8$  and  $R^{12} = H$ , the radical  $R^9 =$  phenyl, the radicals  $R^{10}$  and  $R^{11}$  together =  $(CH_2)_5$  and the radical  $R^{20} = CH_3$  as the hydrochloride

10

or

the radicals  $R^3$  to  $R^8$  and  $R^{12} = H$ , the radical  $R^9 =$  thiophene and the radicals  $R^{10}$  and  $R^{11}$  together =  $(CH_2)_2O(CH_2)_2$

15

or

20

the radicals  $R^3$  to  $R^8 = H$ , the radical  $R^{12} = CH_3$ , the radical  $R^9 =$  thiophene, 4-methoxyphenyl or 3,4-dimethoxyphenyl and the radicals  $R^{10}$  and  $R^{11}$  together =  $(CH_2)_2O(CH_2)_2$

25

and the enantiomers of the compound of the general formula I in which  $R^1 = CH(R^9)N(R^{10})(R^{11})$  and  $R^2 = OR^{12}$  and the radicals  $R^3$  to  $R^8$ ,  $R^{12} = H$ ,  $R^9 =$  phenyl and  $R^{10}$  and  $R^{11}$  together =  $(CH_2)_5$ ,

30

(+)-1-( $\alpha$ -N,N-dimethylaminobenzyl)-2-naphthol and the corresponding tartrate,

(-)-1-( $\alpha$ -N,N-dimethylaminobenzyl)-2-naphthol and the corresponding tartrate,  
and

5

(-)-[(2-methoxynaphth-1-yl)benzyl]-dimethylamine

and

10

the racemates of the compounds in which the radicals  $R^1$  =  $OR^{12}$  and  $R^2$  =  $CH(R^9)N(R^{10})(R^{11})$  and in each case the radicals

15

$R^3$  to  $R^8$  and  $R^{12}$  = H, the radical  $R^9$  = phenyl, 2-bromophenyl, 3-bromophenyl or 4-bromophenyl and the radicals  $R^{10}$  and  $R^{11}$  together =  $(CH_2)_5$

or

20

$R^3$  to  $R^8$  and  $R^{12}$  = H, the radical  $R^9$  = phenyl or 2-nitrophenyl and the radicals  $R^{10}$  and  $R^{11}$  together =  $(CH_2)_2O(CH_2)_2$

or

25

$R^3$ ,  $R^4$ ,  $R^6$ ,  $R^8$  and  $R^{12}$  = H, the radicals  $R^5$ ,  $R^7$  =  $CH_3$ , the radical  $R^9$  = phenyl or 4-methoxyphenyl and the radicals  $R^{10}$  and  $R^{11}$  together =  $(CH_2)_5$

30

or

$R^3$  to  $R^6$ ,  $R^8$ ,  $R^{12} = H$ , the radical  $R^7 = CH_3$ , the radical  $R^9 = 4$ -methoxyphenyl or phenyl and the radicals  $R^{10}$ ,  $R^{11}$  together  $= (CH_2)_5$

5 or

$R^3$  to  $R^8$  and  $R^{12} = H$ , the radical  $R^9 =$  phenyl, the radical  $R^{10} = CH_3$  and the radical  $R^{11} = C_6H_{11}$  or the radicals  $R^{10}$  and  $R^{11}$  each  $= CH_3$

10

or

$R^3$  to  $R^6$ ,  $R^8$ ,  $R^{12} = H$ , the radical  $R^7 = CH_3$ , the radical  $R^9 =$  phenyl or 4-methoxyphenyl and the radicals  $R^{10}$  and  $R^{11}$  together  $= (CH_2)_2O(CH_2)_2$

15

or

$R^3$ ,  $R^4$ ,  $R^6$ ,  $R^8$ ,  $R^{12} = H$ , the radicals  $R^5$  and  $R^7 = CH_3$ , the radical  $R^9 = 4$ -methoxyphenyl and the radicals  $R^{10}$  and  $R^{11}$  together  $= (CH_2)_2O(CH_2)_2$

20

or

$R^3$  to  $R^8$ ,  $R^{12} = H$ , the radical  $R^9 =$  phenyl and the radicals  $R^{10}$  and  $R^{11}$  together  $= (CH_2)_2O(CH_2)_2$  as the hydrochloride.

25